

Claims

1. Machine for cutting an opening, such as a window in a planar substrate (1), said machine having at least a cutting tool (12) characterised in that it comprises a transfer system (7,8) holding said substrate (1) and driving said substrate along a determined direction, and in that the cutting tool (12) comprises a laser beam (13) that can be moved in two perpendicular directions and evacuation means (11,15) to evacuate a cut part of said substrate (1).
2. Machine as claimed in claim 1, wherein it further comprises an aspiration box (9) to maintain the substrate (1) during the cutting operation.
3. Machine as claimed in claim 2, wherein said aspiration box (9) comprises a bottom wall (17) with aspiration openings (10) and a cutting opening (14).
4. Machine as claimed in one of the preceding claims, wherein said transfer system is a chain gripper system (17).
5. Machine as claimed in one of the preceding claims, wherein said laser (12) is displaced linearly or rotationally.
6. Machine as claimed in one of claims 1 to 4, wherein said laser beam (13) is displaced linearly or rotationally.
7. Machine as claimed in one of the preceding claims, wherein it further comprises a laminate application unit

for applying a strip of laminate over the cut opening of the substrate.

8. Process for cutting an opening, such as a window, in a planar substrate, said process being characterised by the following steps:

- ) holding said substrate with a gripper,
- ) moving said substrate along a given direction,
- ) applying said substrate against a surface,
- 10 -) illuminating said substrate with a laser beam to cut an opening in said substrate,
- ) evacuating the cut part of said substrate.

9. Process according to claim 8, wherein said application step of substrate against a surface is made by using air under depression.

10. Process according to claim 8 or 9, wherein said evacuation step is made by aspiration means with air under depression.

11. Process according to one of claims 8 to 10, wherein said laser beam is displaced along two orthogonal axes.

12. Process according to one of claims 8 to 11, wherein said laser beam is rotated around two orthogonal axes.

13. Process according to one of claims 8 to 12, wherein a mirror displaces said laser beam.

14. Process according to one of claims 8 to 13, wherein it further comprises the step of applying laminate over the cut opening of the substrate.